

CLAIMS

1. A method for producing a male-sterile plant comprising ligating a first promoter fragment to the upstream of an RNase gene, ligating a second promoter, which is the same as said first promoter or different therefrom, to the upstream of an RNase inhibitor protein gene, and transferring these genes into a plant genome to thereby make said plant substantially male-sterile.
2. The method for producing a male-sterile plant as claimed in claim 1 wherein said RNase gene is barnase gene.
3. A method for producing a male-sterile plant as claimed in claim 1 or 2 wherein said RNase inhibitor protein gene is Barstar gene.
4. A method for producing a male-sterile plant as claimed in any of claims 1 to 3 wherein the first promoter and the second promoter are both promoters causing anther-specific expression.
5. A method for producing a male-sterile plant as claimed in any of claims 1 to 4 wherein said first promoter is a part of the promoter represented by SEQ ID NO:6.
6. A method for producing a male-sterile plant as claimed in any of claims 1 to 5 wherein said first promoter is the promoter represented by SEQ ID NO:7.
7. A promoter comprising a part of the sequence represented by SEQ ID NO:6.
8. A promoter comprising the sequence represented by SEQ ID NO:7 or a sequence obtained by modifying the same by the substitution, deletion or addition of one or more

nucleotides.

9. A plasmid vector which has a T-DNA containing i) a first promoter fragment and an RNase gene the expression of which is induced by the first promoter, and ii) a second promoter being the same as the first promoter or different therefrom and an RNase inhibitor protein gene the expression of which is induced by the second promoter, said plasmid vector being capable of introducing said T-DNA into a plant cell genome when placed in agrobacterium-infected plant cells.

10. A transgenic plant cell which contains i) a first promoter fragment and an RNase gene the expression of which is induced by the first promoter, and ii) a second promoter being the same as the first promoter or different therefrom and an RNase inhibitor protein gene the expression of which is induced by this second promoter transferred into the genome thereof, and a male-sterile plant regenerated from said cell.